ISSN (print) 0093-4666 © 2014. Mycotaxon, Ltd. ISSN (online) 2154-8889

MYCOTAXON

http://dx.doi.org/10.5248/127.89

Volume 127, pp. 89–92 January–March 2014

Cristinia tubulicystidiata sp. nov. from India

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Abstract — A new corticioid species, *Cristinia tubulicystidiata*, is described from the Kalatop area, Chamba (Himachal Pradesh), India.

Key words — *Agaricomycetes,* tubular cystidia, Dalhousie, Lakkar Mandi

While conducting fungal forays in the Kalatop area near Dalhousie in district Chamba, Himachal Pradesh (India), Dhingra and Hallenberg collected an unknown corticioid fungus on a fallen tree of *Cedrus deodara.* On the basis of cyanophilous basidiospores and granules in the basidia, the specimen was compared with species within *Cristinia* (Parmasto 1968, Liberta 1973, Eriksson & Ryvarden 1975, Nakasone & Gilbertson 1978, Baici & Hjortstam 1984, Hjortstam et al. 1987, Hjortstam & Grosse-Brauckmann 1993, Bernicchia & Gorjón 2010, Nakasone 2008, 2012) but could not be assigned to any known species. We describe it here as a new species and provide a key to all species of *Cristinia.*

Cristinia tubulicystidiata J. Kaur, Dhingra & Hallenberg, **sp. nov.** Figs 1–6

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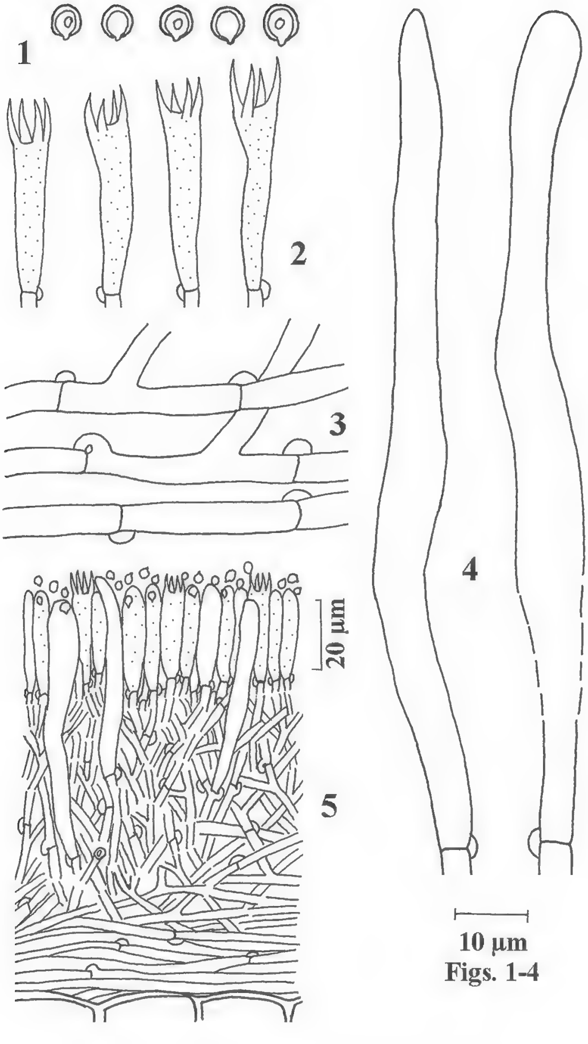
Differs from all other *Cristinia* species by its tubular smooth embedded cystidia.

Type: India, Himachal Pradesh: Chamba, Dalhousie, about 2 km from Lakkar Mandi towards Kalatop, on log of *Cedrus deodara* (Roxb. ex D. Don) G. Don, 16 August 2010, Dhingra & Hallenberg 4763 (PUN, **holotype**).

Etymology: The epithet refers to the presence of tubular cystidia.

Basidiocarp resupinate, adnate, effused, ceraceous, up to 150 µm thick in section; hymenial surface smooth, cream-coloured to pale orange; margins thinning out, concolorous and indeterminate. Hyphal system monomitic; generative



Figs 1–5. *Cristinia tubulicystidiata* (holotype, PUN).
1. Basidiospores; 2. basidia; 3. generative hyphae; 4. cystidia; 5. section through basidiocarp.

hyphae 3–4.5 µm wide, septate, clamped; basal hyphae parallel to the substrate, forming a distinct subicular layer, approximately 25 µm thick, hyphae sparsely branched but densely united, with distinct walls and big clamps; subhymenial hyphae vertical, thin-walled, more branched. Cystidia 106–145 × 7.7–8.3 µm,

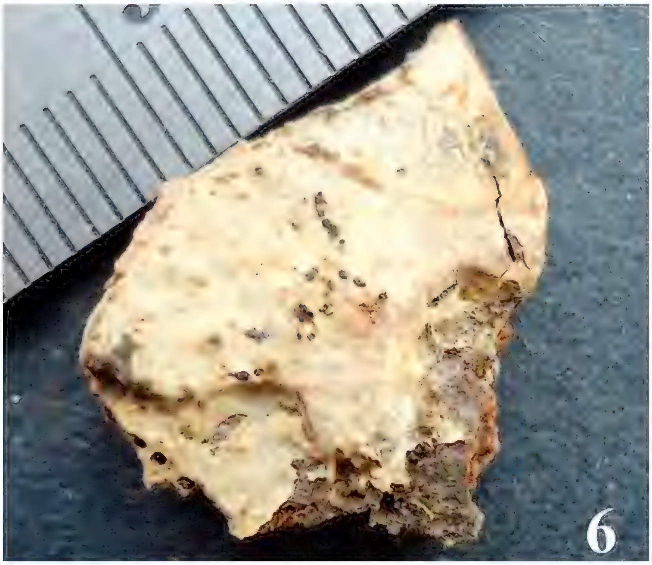


Fig. 6. *Cristinia tubulicystidiata* (holotype, PUN). Basidiocarp showing hymenial surface.

tubular but with slightly irregular outline, smooth, with distinct walls and a light refracting content in phase contrast, arising from the basal hyphae and do not project above the hymenial level. Basidia 19–25 × 4.4–5.5 µm, cylindrical but somewhat constricted, with basal clamp, 4-sterigmate; sterigmata ≤6.1 µm long. Blue-stained granules are found in the basidia when stained in Cotton Blue. Basidiospores 3.3–4.5 × 3.5–5.0 µm, subglobose to globose, some spores slightly angular in outline, with a distinct oil-drop, smooth, with thickened walls, distinctly cyanophilous and metachromatic in phase, inamyloid.

Remarks— The staining of spore walls in cotton blue and basidial granules are characteristic of *Cristinia*. *Cristinia tubulicystidiata* is easily recognized by its smooth ceraceous basidiome and the tubular smooth embedded cystidia that distinguish it from all other species in the genus.

Key to the species of *Cristinia*

We follow the generic concepts of Hjortstam & Grosse-Brauckmann (1993) and Nakasone (2008, 2012).

1. All hyphae without clamps 2
1. Hyphae with clamps, at least on subhymenial hyphae 3

2. Hymenophore grandinoid, basal hyphae 4–6 µm wide . . . . *C. artheniensis*
2. Hymenophore smooth to minutely grandinioid, basal hyphae 8–10 µm wide . . . . *C. brevicellularis*

3. Basal hyphae without or with scattered clamps, subhymenial hyphae with clamps 4
3. All hyphae with clamps ... 5

4. Hymenium stained violet with KOH, spores 5–7 µm in diam. ... *C. rhenana*
4. Hymenium not stained violet with KOH, spores 4–5 µm in diam. ... *C. coprophila*

5. Hymenial surface aculeate or irpicoid ... 6
5. Hymenial surface smooth to hypochnoid to grandinoid ... 7

6. Spores broadly ellipsoid, 3.6–4.5 × 2.9–3.5 µm ... *C. decolorans*
6. Spores subglobose, 5–6 µm in diam. ... *C. eichleri* (= *C. gallica*)

7. Cystidia present ... *C. tubulicystidiata*
7. Cystidia absent ... *C. helvetica*

Acknowledgements

The authors thank Head (Department of Botany, Punjabi University, Patiala) for providing research facilities, Dr. E. Langer (University Kassel, Department Ecology, Kassel, Germany) for expert comments and peer review, and Prof. B.M. Sharma (Department of Plant Pathology, COA, CSKHPAU, Palampur, H.P., India) for peer review.

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